

Automotive

RUBI**FLEX**®

The seating systems for production simplicity



Huntsman Polyurethanes is one of the world's leading producers of MDI – a key ingredient in the production of polyurethane. The company also produces flexible and rigid polyethers, polyesters, polyether amines, polyurea amines, propylene oxide, polyols and fully formulated polyurethane systems and polyurea systems.



For the past 25 years Huntsman Polyurethanes has been one of the leading suppliers of high performance, cost effective MDI seating systems into the automotive market.

RUBIFLEX® Systems for Production Simplicity



To meet the needs of our customers we have developed a new seating technology design to provide simplicity in meeting a broad range of seating specifications. The technology is delivered in the form of a fully formulated system and requires no modification to produce a broad range of specifications.

The systems afford a number of benefits to our customers:

- Efficient and economic in use
- Provides excellent flow and stability
- Effective over a broad range of index
- Effective in all mould types
- No Polymer Polyol required
- Achieves many OEM specifications including Fiat, RSA, PSA & Toyota.

THE CHOICE IS SIMPLE

RUBIFLEX® HR

- Exceptionally robust
- Ultra low density variants

The technology
can be delivered
in two fully
formulated systems

RUBIFLEX® HR+

- Produces low emission foam
- Enhanced comfort and durability

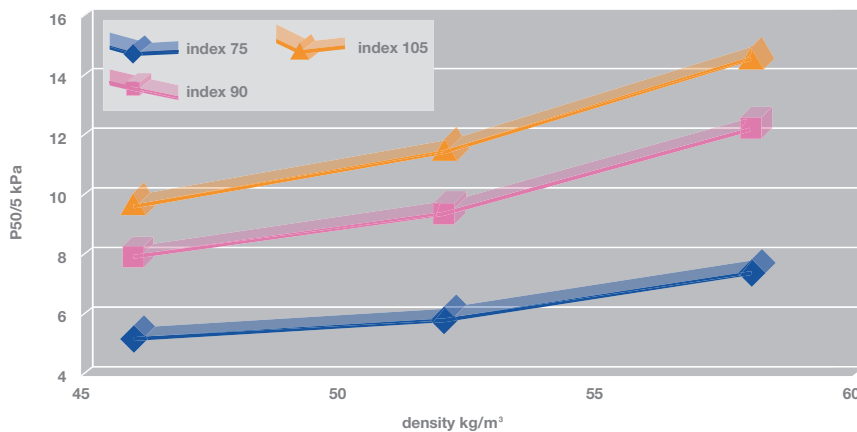
Typical physical properties

RUBIFLEX® HR⁺ VW properties from high pressure moulding (method PV3410).

Norm	Test	Condition	Unit	index 75	index 90	index 105	Target FSC PV3410
DIN EN ISO 845	Density core		kg/m ³	42-50	42-50	42-50	
	Density with top skin		kg/m ³	45-55	45-55	45-55	
DIN EN ISO 1856	Compression set (deformation)	Fresh – core	%	<6	<6	<6	<10
		Aged – core +90°C, 100-6% r.H., 200h	%	<12	<13	<15	<15
DIN EN ISO 3386-1	Hardness change	Humid heat aged +90°C, 100-6 % r.H, 200h	%	-20	-15	-15	max. -25% to +10%
DIN EN ISO 1798	Tensile strength	Fresh	kPa	>90	>130	>150	>90
		Heat aged: +90°C, 200h	kPa	>90	>120	>130	>90
		Humid heat aged: +90°C, 100-6% r.H, 200h	kPa	>90	>100	>90	>90
DIN EN ISO 1798	Elongation	Fresh	%	>100	>100	>80	>80
		Heat aged: +90°C, 200h	%	>100	>90	>80	>80
		Humid heat aged: +90°C, 100-6% r.H, 200h	%	>110	>100	>100	>80
DIN 53356	Tear strength	Mean	N/cm	1.7-2.1	2.0-2.5	2.4-3.0	>2.0
		Maximum	N/cm	1.9-2.5	2.2-3.4	2.8-3.6	

RUBIFLEX® HR⁺

CLD 50% (5th cycle with skin)



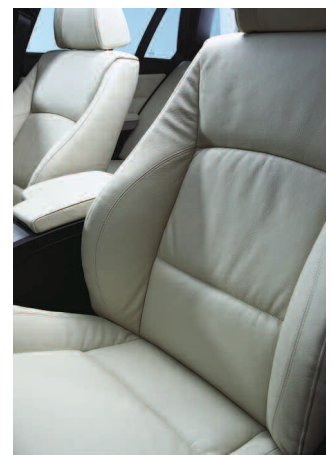
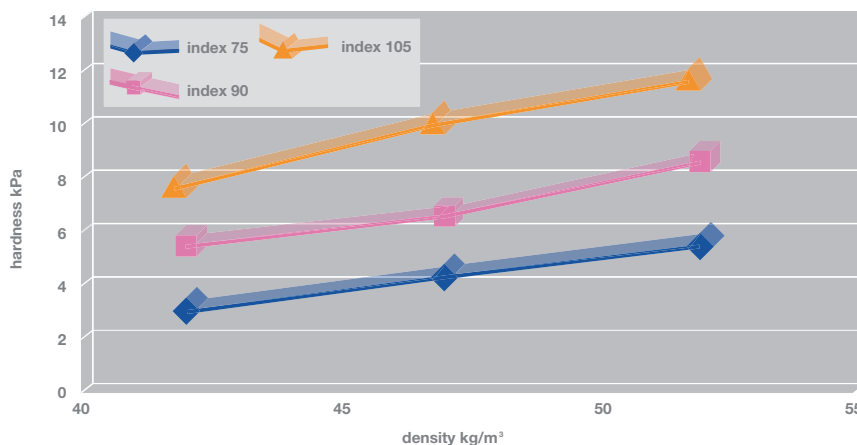
Plots showing the impact of index and density on the measured hardness according to typical industry test methods:

CLD 50% (5th cycle with skin):
Indicative of Renault test methods

F40% CLD (4th cycle):
Indicative of VW test methods

RUBIFLEX® HR⁺

F40% CLD (4th cycle)



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